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SENNIGER POWERS LEAVITT AND ROEDEL
ONE METROPOLITAN SQUARE
16TH FLOOR
ST LOUIS, MO 63102

EXAMINER

GREEN, ANTHONY J

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 09/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/619,198

Applicant(s)

OWEI ET AL.

Examiner

Anthony J. Green

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-61 is/are pending in the application.
- 4a) Of the above claim(s) 59-61 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-43 and 45-58 is/are rejected.
- 7) ☒ Claim(s) 44 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 09/22/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-58, drawn to an adhesion promoting composition, classified in class 106, subclass 1.05+.
 - II. Claims 59-61, drawn to method of manufacturing a PCB, classified in class 427, subclass 96.1+.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions II and I are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the composition as claimed can be used in another and materially different process other than PCB manufacture such as coating glass windshields for subsequent metallization for defogging.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Applicant's Representative Paul Fleischut and Primary Examiner Brian Talbot on 8/20/04 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-58. Affirmation of this election must be made by applicant in replying to this Office action. Claims 59-61 have been

withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2-25, 29, 31, 33-34, 41, 46-47 and 51-58 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 2-25, 29, 31, 33-34, 41, and 46-47 the language of "selected from among" is vague and indefinite as it is not proper Markush terminology. The language should be changed to read -- selected from the group consisting of --.

In claim 51 the phrase "the oxidizing agent" lacks proper antecedent basis.

In claim 56 the phrase "the oxidizing agent" lacks proper antecedent basis.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 10-17 and 26-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Ferrier (US Patent No. 5,869,130).

The reference teaches, in the abstract, the examples and the claims, a process for treating metals to increase the adhesion of polymeric materials comprising an oxidizer, an acid, a corrosion inhibitor, a source of halide ions, and optionally a water soluble polymer. According to claim 5 and column 5, line 22+, the water soluble polymer may be selected from polyethylene glycols, polypropylene glycols, polyvinyl alcohols etc. See also examples 6 and 8 and claims 1 and 5 which teach the addition of the water soluble polymer.

No significant differences can be seen between the instant claims and the reference as the reference teaches a composition that encompasses that which is instantly claimed. As for the amounts of the components, the reference teaches the use of amounts that encompass that which is instantly claimed. The limitation of "for enhancing adhesion....board" is an intended use and as such, it adds little or no patentably weight to the claim. Ultimate intended utility does not make a composition patentable. See *In re Pearson*, 181 U.S.P.Q. 641. As for the properties of the

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composition, namely claims 28-31, these appear to be inherent properties possessed by the composition since the composition is the same.

5. Claims 1, 10-17 and 26-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Ferrier et al (US Patent No. 6,020,029).

The reference teaches, in the abstract and the claims, a process for treating metals to increase the adhesion of polymeric materials comprising an oxidizer, an acid, a corrosion inhibitor, optionally a source of halide ions, and optionally a water soluble polymer. According to claim 5 and column 5, lines 59+, the water soluble polymer may be selected from polyethylene glycols, polypropylene glycols, polyvinyl alcohols etc. See also claims 1 and 5 which teach the addition of the water soluble polymer.

No significant differences can be seen between the instant claims and the reference as the reference teaches a composition that encompasses that which is instantly claimed. As for the amounts of the components, the reference teaches the use of amounts that encompass that which is instantly claimed. The limitation of "for enhancing adhesion....board" is an intended use and as such, it adds little or no patentably weight to the claim. Ultimate intended utility does not make a composition patentable. See *In re Pearson*, 181 U.S.P.Q. 641. As for the properties of the composition, namely claims 28-31, these appear to be inherent properties possessed by the composition since the composition is the same.

6. Claims 1, 10-17 and 26-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Ferrier (US Patent No. 6,146,701).

The reference teaches, in the abstract and the claims, a process for treating metals to increase the adhesion of polymeric materials comprising an oxidizer, an acid, a corrosion inhibitor, a source of halide ions, a source of adhesion ions, and optionally a water soluble polymer. According to claim 5 and column 5, lines 57+, the water soluble polymer may be selected from polyethylene glycols, polypropylene glycols, polyvinyl alcohols etc. See also claims 1 and 5 which teach the addition of the water soluble polymer.

No significant differences can be seen between the instant claims and the reference as the reference teaches a composition that encompasses that which is instantly claimed. As for the amounts of the components, the reference teaches the use of amounts that encompass that which is instantly claimed. The limitation of "for enhancing adhesion...board" is an intended use and as such, it adds little or no patentably weight to the claim. Ultimate intended utility does not make a composition patentable. See *In re Pearson*, 181 U.S.P.Q. 641. As for the properties of the composition, namely claims 28-31, these appear to be inherent properties possessed by the composition since the composition is the same.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 45-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Price et al (US Patent No. 5,800,859).

The reference teaches, in the abstract, the examples and the claims, an adhesion promotion composition comprising hydrogen peroxide, an inorganic acid, an organic corrosion inhibitor and a surfactant. According to column 5, lines 15+, the surfactant is preferably a cationic surfactant.

The instant claims are obvious over the reference. The limitation of "for enhancing adhesion....board" is an intended use and as such, it adds little or no patentably weight to the claim. Ultimate intended utility does not make a composition patentable. See *In re Pearson*, 181 U.S.P.Q. 641. The only difference seen to exist between the instant claims and that of the reference lies in the type of surfactant. Instant claims 45-50 require an anionic surfactant whereas instant claims 51-54 require a particular surfactant. It is the position of the examiner that it would have been obvious to one of ordinary skill in the art to substitute other types of surfactants (such as an anionic or nonionic) for the surfactant of the reference as the reference broadly discloses the addition of a surfactant with a cationic one being preferred. Accordingly since a cationic is preferred but not required it would appear obvious that one may use any type of surfactant without producing any unexpected results. That is, just because the reference teaches the preferred use of a cationic surfactant does not preclude the use of an anionic or nonionic surfactant. As for the particularly claimed types of anionic

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and nonionic surfactants, applicants choices are well known types of surfactants and accordingly their use is obvious. Accordingly the instant claims are obvious over the reference.

9. Claims 1, 10-17 and 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferrier (US Patent No. 6,162,503).

The reference teaches, in the abstract and the claims, a process for treating metals to increase the adhesion of polymeric materials comprising an oxidizer, an acid, a corrosion inhibitor, a benzotriazole with an electron withdrawing group in the 1-position and optionally a source of adhesion enhancing species. According to column 6, lines 35+, optionally a water soluble polymer may be added selected from polyethylene glycols, polypropylene glycols, polyvinyl alcohols etc.

The instant claims are obvious over the reference. While the reference does not specifically teach the addition of an alcohol it does teach that a water soluble polymer such as polyethylene glycols, polypropylene glycols, polyvinyl alcohols etc may be added as optional components. Accordingly one of ordinary skill in the art would have found it obvious to add this component into the composition and thus arrive at the instant invention. As for the amounts of the components, the reference teaches the use of amounts that encompass that which is instantly claimed. The limitation of "for enhancing adhesion....board" is an intended use and as such, it adds little or no patentably weight to the claim. Ultimate intended utility does not make a composition patentable. See *In re Pearson*, 181 U.S.P.Q. 641. As for the properties of the

composition, namely claims 28-31, these appear to be obvious and/or inherent properties possessed by the composition since the composition is the same.

10. Claims 1, 10-17 and 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferrier (US Patent No. 6,383,272).

The reference teaches, in the abstract and the claims, a process for treating metals to increase the adhesion of polymeric materials comprising an oxidizer, an acid, a corrosion inhibitor, an organic nitro compound and a source of halide ions. Also present may be a source of adhesion enhancing species, a benzotriazole (see claims 19 and 34) and a water soluble polymer (claim 17). According to column 7, lines 6+ the water soluble polymer may be added selected from polyethylene glycols, polypropylene glycols, polyvinyl alcohols etc.

The instant claims are obvious over the reference. While the reference does not specifically teach the addition of an alcohol it does teach that a water soluble polymer such as polyethylene glycols, polypropylene glycols, polyvinyl alcohols etc may be added as optional components. Accordingly one of ordinary skill in the art would have found it obvious to add this component into the composition and thus arrive at the instant invention. As for the amounts of the components, the reference teaches the use of amounts that encompass that which is instantly claimed. The limitation of "for enhancing adhesion....board" is an intended use and as such, it adds little or no patentably weight to the claim. Ultimate intended utility does not make a composition patentable. See *In re Pearson*, 181 U.S.P.Q. 641. As for the properties of the

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composition, namely claims 28-31, these appear to be obvious and/or inherent properties possessed by the composition since the composition is the same.

11. Claims 1, 10-17 and 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferrier (US Patent No. 6,419,784).

The reference teaches, in the claims, a process for increasing the adhesion of polymeric materials to a metal surface using a composition comprising an oxidizer, an acid, a corrosion inhibitor, an organic nitro compound and a source of halide ions. Also present may be organic nitro compounds, a benzotriazole, a water soluble polymer and a source of halide ions (see claims 1 and 4). According to column 7, lines 35+ the water soluble polymer may be selected from polyethylene glycols, polypropylene glycols, polyvinyl alcohols etc.

The instant claims are obvious over the reference. While the reference does not specifically teach the addition of an alcohol it does teach that a water soluble polymer such as polyethylene glycols, polypropylene glycols, polyvinyl alcohols etc may be added as optional components. Accordingly one of ordinary skill in the art would have found it obvious to add this component into the composition and thus arrive at the instant invention. As for the amounts of the components, the reference teaches the use of amounts that encompass that which is instantly claimed. The limitation of "for enhancing adhesion....board" is an intended use and as such, it adds little or no patentably weight to the claim. Ultimate intended utility does not make a composition patentable. See *In re Pearson*, 181 U.S.P.Q. 641. As for the properties of the

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composition, namely claims 28-31, these appear to be obvious and/or inherent properties possessed by the composition since the composition is the same.

12. Claims 1, 10-17 and 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferrier (US Patent No. 6,503,566).

The reference teaches, in the abstract and the claims, a process for increasing the adhesion of a polymeric material to a metal surface using a composition comprising an oxidizer, an acid, a corrosion inhibitor, an organic nitro compound and a source of halide ions. Also present may be a source of adhesion enhancing species, a benzotriazole (see claim 4) and a source of adhesion enhancing species (see claim 5). According to column 7, lines 12+ the composition may further comprise a water soluble polymer selected from polyethylene glycols, polypropylene glycols, polyvinyl alcohols etc.

The instant claims are obvious over the reference. While the reference does not specifically teach the addition of an alcohol it does teach that a water soluble polymer such as polyethylene glycols, polypropylene glycols, polyvinyl alcohols etc may be added as optional components. Accordingly one of ordinary skill in the art would have found it obvious to add this component into the composition and thus arrive at the instant invention. As for the amounts of the components, the reference teaches the use of amounts that encompass that which is instantly claimed. The limitation of "for enhancing adhesion....board" is an intended use and as such, it adds little or no patentably weight to the claim. Ultimate intended utility does not make a composition

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patentable. See *In re Pearson*, 181 U.S.P.Q. 641. As for the properties of the composition, namely claims 28-31, these appear to be obvious and/or inherent properties possessed by the composition since the composition is the same.

13. Claims 1, 10-17 and 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferrier (US Patent No. 6,554,948).

The reference teaches, in the abstract and the claims, a process for increasing the adhesion of a polymeric material to a metal surface using a composition comprising hydrogen peroxide, an inorganic acid, a corrosion inhibitor, benzotriazole and optionally a source of adhesion enhancing species (see claim 4). According to column 6, lines 32+ a water soluble polymer may be added selected from polyethylene glycols, polypropylene glycols, polyvinyl alcohols etc. as an optional component.

The instant claims are obvious over the reference. While the reference does not specifically teach the addition of an alcohol it does teach that a water soluble polymer such as polyethylene glycols, polypropylene glycols, polyvinyl alcohols etc may be added as optional components. Accordingly one of ordinary skill in the art would have found it obvious to add this component into the composition and thus arrive at the instant invention. As for the amounts of the components, the reference teaches the use of amounts that encompass that which is instantly claimed. The limitation of "for enhancing adhesion....board" is an intended use and as such, it adds little or no patentably weight to the claim. Ultimate intended utility does not make a composition patentable. See *In re Pearson*, 181 U.S.P.Q. 641. As for the properties of the

composition, namely claims 28-31, these appear to be obvious and/or inherent properties possessed by the composition since the composition is the same.

14. Claims 1, 10-17, 26-43 and 55-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Montano et al (US Patent No. 6,752,878).

The reference teaches, in the abstract and the claims, a method for treating a metal surface with an adhesion promoting composition wherein the composition comprises an oxidizer, an acid and a corrosion inhibitor. According to column 8, lines 63+ a water soluble polymer may be added selected from polyethylene glycol as an optional component. Also, column 11, lines 3+, teach the optional addition of cationic, amphoteric, anionic and/or nonionic surfactants in order to enhance the effectiveness of the adhesion-promoting solution.

The instant claims are obvious over the reference. While the reference does not specifically teach the addition of an alcohol it does teach that a water soluble polymer such as polyethylene glycols may be added as optional components. Accordingly one of ordinary skill in the art would have found it obvious to add this component into the composition and thus arrive at the instant invention. As for the type of acid, column 8, lines 1+, teach that nitric, sulfuric and other acids may be used as the type of acid. As for the amounts of the components, the reference teaches the use of amounts that encompass that which is instantly claimed. The addition of a surfactant is suggested by the reference and one of ordinary skill in the art would find the specific type of surfactant a matter of obvious choice or design since no specific types are mentioned by the

reference. The limitation of "for enhancing adhesion....board" is an intended use and as such, it adds little or no patentably weight to the claim. Ultimate intended utility does not make a composition patentable. See *In re Pearson*, 181 U.S.P.Q. 641. As for the properties of the composition, namely claims 28-31, these appear to be obvious and/or inherent properties possessed by the composition since the composition is the same. As for claim 43 while the reference does not specifically teach this composition, it does teach that this type of composition could be formulated based on the teachings of the types of components and the amounts suggested in the reference. Accordingly the instant claims are obvious over the reference.

Allowable Subject Matter

15. Claims 2-9 and 18-25 would be allowable if rewritten to overcome the rejections under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

16. Claim 44 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Information Disclosure Statement

17. The remaining references have been considered however they are not seen to teach and/or fairly suggest the instant invention.


References Cited By The Examiner

18. The remaining references are cited as showing the general state of the art and as such, they are not seen to teach or fairly suggest the instant invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony J. Green whose telephone number is 571-272-1367. The examiner can normally be reached on Monday-Thursday 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark L. Bell can be reached on 571-272-1362. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Anthony J. Green
Primary Examiner
Art Unit 1755

ajg
September 17, 2004